

XLII.—*New and peculiar Mollusca of the Pecten, Mytilus, and Arca Families procured in the 'Valorous' Expedition.*
By J. GWYN JEFFREYS, LL.D., F.R.S.

Pectinidæ.

*Pecten fragilis**, Jeffr.

SHELL roundish, equilateral, much compressed or flattened, excessively thin and brittle, of a paper-like consistency, semi-transparent, rather glossy, and somewhat iridescent: *sculpture*, in the upper valve 15–20 concentric ribs or undulating folds, which do not extend to the sides, besides numerous longitudinal fine and raised striæ, which latter radiate from the beak and cover the whole surface; the sides are otherwise marked by close-set lines of growth only; the lower valve has a few slight concentric ribs, but no longitudinal striæ: *colour* silvery-white: *margins* semicircular in front, and sloping gradually towards the hinge-line, below which on each side there is a gentle curve or depression: *beaks* very small and rather prominent: *ears* small but broad, equal in size, right-angled: *hinge-line* straight: *cartilage-pit* very small, triangular: *hinge-plate* broad and smooth: *inside* pearly: *muscular scars* inconspicuous. L. 0·35. B. 0·35.

'Valorous' Expedition: Station 9, 1750 fathoms; St. 12, 1450 fathoms; St. 16, 1785 fathoms. Norwegian Expedition, 1876, 1000–1500 fms. Fragments only.

This species belongs to the section or subgenus *Pseudamussium* of Klein, along with *Pecten grænlandicus*, *P. vitreus*, and *P. similis*.

A specimen from 1450 fathoms is permeated by the same curious branching sponge (?) or organism that infests so many shells from deep water and has been considered a Fungus by some naturalists.

Genus AMUSSIUM†, (*Amusium*) Rumphius.

SHELL inequivalve, more or less circular, flattened, smooth or variously sculptured, furnished inside with slight ribs, which radiate from the hinge and are not impressions of outside markings, but are quite irrespective of them.

The institution of this genus has been attributed by every author to Klein; but Rumphius (the "Plinius Indicus") has precedence of him by nearly half a century. The type of

* Brittle.

† Something exactly and evenly planed.

both was the same, viz. the "compass-scallop," or *Ostrea pleuronectes* of Linné. Swainson called it *Pleuronectia*: his description, however, is both inadequate and incorrect; and that name had been appropriated by Rafinesque to a well-known family of fishes. The descriptions of *Amussium* and *Amusium* given by Messrs. Adams and Dr. Woodward are also unsatisfactory. The peculiar character of the genus consists in each valve being fluted inside, without any corresponding ribs appearing outside as in certain species of *Pecten*. The use of these internal ribs may be to strengthen and support the delicate fabric of the shell.

*Amussium lucidum**, Jeffr.

Pleuronectia lucida, Jeffr. in Wyville Thomson's 'Depths of the Sea,' p. 464, f. 78.

SHELL roundish, with a tendency to become longer and oval in some specimens, equilateral, flattened, very thin, semitransparent, and glossy: *sculpture*, in the upper valve none, except fine concentric and close-set lines of growth, which are more conspicuous towards the outer edge in front; the lower valve, which is much smaller than the other, is marked with regular but crowded concentric striæ: *colour* white: *margins* semi-circular in front and at the sides, whence there is an abrupt slope to the back: *beaks* minute and inconspicuous: *ears* small, nearly equal in size, right-angled: *hinge-line* straight, occasionally spinous: *cartilage-pit* minute, triangular, with a curved base: *hinge-plate* broad and smooth: *inside* pearly, furnished with 9 slight and thread-like ribs, which are visible on the outside, owing to the thinness and semitransparency of the shell; these ribs occupy only the middle of the interior, and do not extend to the umbonal or posterior area, nor in full-grown specimens to the front; each rib terminates abruptly in a rounded knob or point; one is in the centre, and the others diverge on either side, the last or hindmost pair forming the base of each ear: *muscular scars* roundish-oval, situate below the beaks. L. 0.5. B. 0.5.

Station 12, 1450 fms., lat. 56° 11' N., long. 37° 41' W., *Globigerina*-ooze and stones. 'Porcupine' Exp., 1869, 557-862 fms.; 1870, 500-1095 fms. Gulf of Mexico, off Alligator Bank, 156 fms. (Pourtales). 'Challenger' Exp., off the Azores, 1000 fms.

Single valves from all depths are not unfrequently marked in the same way as I have noticed as to *Pecten fragilis*.

* Shining.

Other species of *Amussium* in the European seas are:—*A. fenestratum*, Forbes (*Pecten*), the lower valve of which is his *P. concentricus*, Philippi's *P. antiquatus*, Acton's *P. Philippii*, E. von Martens's *P. Actoni*, and Tiberi's *P. inæquisculptus*; and *A. striatum*, Jeffr. MS. To this genus also belongs *Pecten cristatus* of Bronn, a fossil of the older Italian Tertiaries.

Lima ovata, S. V. Wood.

Lima ovata, S. V. Wood, Monogr. Crag Moll. (Palæont. Soc. Publ.), vol. ii. p. 48, tab. vii. fig. 5.

SHELL broadly oval, with a somewhat oblique outline, convex, rather thin, semitransparent, and glossy: *sculpture*, about 50 fine longitudinal ribs, which are of a proportionate size throughout; these are crossed by numerous and close-set concentric striæ, giving the crests of the ribs a slightly notched or prickly appearance: *colour* white, with a yellowish-brown tint in a living specimen: *margins* rounded and more or less scalloped in front, with a gentle curve at the sides: *beaks* prominent, and having a blunt or tubercular nucleus: *ears* very small and narrow, obtuse-angled: *cartilage* minute: *ligament* narrow: *hinge-line* straight: *hinge-plate* spindle-shaped, with a plain or smooth edge: *cartilage-pit* triangular and narrow: *inside* glossy, exhibiting the reverse of the ribs but no central or other furrow. L. 0·2. B. 0·125.

One living specimen and three valves, besides a few fragments, from Station 12, 1450 fathoms. One fragment is much larger than the others, and represents a size double that which is stated in the above description.

I have described anew this species, for the purpose of giving more details than are found in Mr. Wood's diagnosis of the Crag fossil and of comparing with it what I believe to be the now living or recent form. The oblique contour is observable in some of the Crag specimens. These are certainly thicker than living specimens; but such difference may be explained by the nature of the former and present habitats. The Coral-line Crag, in which *L. ovata* occurs, was probably formed at a depth not exceeding 50 fathoms. I have shown^{ed} in the cases of *Mactra solida* and its variety *elliptica* ('British Conchology,' vol. ii. pp. 418, 419), as well as of *Buccinum undatum* and many other Mollusca, that shells of the same species from deep water are invariably thinner than those from shallow water. The partial absence of ribs or striæ in the Crag specimens is observable also in the variety *leviuscula* of *Lima elliptica*; and even Crag specimens of *L. ovata* vary in that respect. In my specimen of *L. ovata* from Monte Mario the

ribs cover the whole surface. Some allowance may also be made for "descent with modification" during the enormous lapse of time which has taken place since the Tertiary epoch, as well as for altered conditions of temperature. The same remark is applicable to *Discina fallens* and *D. Atlantica*.

In shape this species is allied to *L. Sarsii* (or *L. crassa*?) : but the sculpture is very different; it is not, like that species, solid; and the hinge-plate is not crenellated or notched.

As to the specific name, I admit that there may be some doubt whether this is the *Ostrea nivea* of Brocchi, to which I once referred it; and I have therefore adopted Mr. Wood's name *ovata*. Brocchi, indeed, did not notice the furrow, which is characteristic of *Lima subauriculata* and *L. elliptica*; and his description and figure are not inappropriate to the present species. Renier never described his *Ostrea nivea*, and merely published the name, with a remark that it came nearest to *O. (Lima) inflata*. *Lima nivea* of Risso and Philippi is apparently *L. subauriculata*, with which Philippi himself subsequently identified it.

Lima subovata *, Jeffr.

SHELL somewhat oval, convex in the middle and compressed towards the sides, thin, semitransparent, and glossy: *sculpture*, about 50 very fine and thread-like longitudinal ribs, which radiate from the beaks and extend to the sides; two of the ribs in the middle are larger than the rest and are divided by a straight furrow; the ribs are crossed by numerous concentric lines of growth: *colour* white: *margins* sharply curved in front, and sloping on each side towards the middle, so as to give the shell the shape of a hen's egg: *beaks* proportionally large and prominent: *ears* triangular, well defined, and nearly straight, with rectangular corners: *cartilage* small: *ligament* narrow: *hinge-line* straight: *hinge-plate* narrow, plain-edged: *cartilage-pit* triangular, with a shelf or ledge on each side to separate the ears: *inside* glossy, exhibiting the reverse or underside of the ribs and central furrow. L. 0.25. B. 0.14.

Single valves from Station 12, 1450 fms. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 664-1443 fms.; between the Hebrides and Färöe Isles in 542 fms., and between the Färöes and Shetland in 125 fms. 'Challenger' Exp., off the Azores, 1000 fms. Palermo (Monterosato)!

This species has a more oval shape and is shorter than *L. subauriculata*; it is bluntly pointed in front and expanding

* Somewhat oval.

on each side ; it is not so convex throughout ; and the ribs are twice as many and finer. In shape it somewhat resembles *L. ovata*, but is more delicately ribbed, and especially has a central furrow.

Lima gibba *, Jeffr.

Differs from *L. subovata* in being larger and proportionally broader, and in having a somewhat oblique outline ; it is remarkably gibbous, pinched up at the sides, and much more sharply pointed in front ; and the ribs are much slighter, more irregularly disposed, and sometimes more or less wanting. In every state of growth the two species are distinguishable by these characters, although found together. L. 0·3. B. 0·2.

Station 9, 1750 fms. ; 12, 1450 fms. ; 16, 1785 fms. Single valves and fragments.

Mytilidæ.

Idas †, Jeffr.

SHELL transversely oblong, thin, nacreous : *ligament* external : *cartilage* none : *hinge* toothless : *hinge-plate* crenated on both sides of the beaks.

Perhaps allied to *Myrina*, although that genus has an internal ligament or cartilage, and it wants the remarkable character afforded by the hinge-plate being crenated. *Modiolaria* and *Crenella*, as well as *Dacrydium*, have the hinge-plate crenated on the posterior side ; but the sculpture in these first named two genera is very different from that of *Idas*, and *Dacrydium* has an internal cartilage. *Idas* resembles *Arca* in shape.

Idas argenteus ‡, Jeffr.

SHELL having the shape of an irregular parallelogram, of a delicate texture, rather opaque, iridescent : *sculpture*, very fine and close-set transverse striæ and microscopic longitudinal striæ ; the latter radiate from the beaks and cover the whole surface of the shell : *colour* silvery white, except the beaks which are reddish brown : *margins* straight at the back and in front, rounded on the anterior and smaller side, and sloping from the back with a curved outline on the posterior side : *beaks* circular and incurved, placed near the anterior side : *ligament* not observable, in consequence of the specimens being imperfect and consisting of single valves only ; but it is

* Gibbous or hunched.

† One of the Argonauts, the "valorous" (see Morris's 'Life and Death of Jason').

‡ Silvery.

certainly not internal: *hinge-line* nearly straight, but obtuse-angled at the hinge: *hinge-plate* narrow, minutely and closely denticulated on both sides of the hinge: *inside* polished and nacreous; edge plain: *scars* inconspicuous. L. 0.2. B. 0.1.

Station 12, 1450 fms. 'Porcupine' Exp., 1869, Bay of Biscay, 994 fms. A single valve from each locality.

Dacrydium vitreum (Holböll), Möller.

Modiola? vitrea (Holböll), Möller, Ind. Moll. Grönl. p. 19.

Station 12, 1450 fms. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 164-664 fms.; North Sea, 345 fms.; outside the English Channel, 2090-2435 fms.: 1870, Bay of Biscay, 386-1095 fms. Greenland (Holböll): Spitzbergen (Torell): Loffoden Isles, 200-300 fms. (Sars): Finmark (McAndrew): 'Challenger' Exp., off the Azores, 1000 fms.: 'Shearwater' Exp., African coast of the Mediterranean, 40-120 fms.: Mediterranean, off Tunis, 30-600 fms. (Nares): Sicily (Stefanis and Monterosato): fossil at Palermo (Philippi as *Modiola pygmæa*).

Living specimens from 2435 fathoms were enclosed in an agglutinated case of Atlantic ooze mixed with *Globigerina* and fragments of sponge, a habit resembling that of "*Modiola*" *agglutinans*, Cantraine, = *M. vestita*, Philippi. The hinge-plate is crenated, as in *Idas*, *Modiolaria*, and *Crenella*; but *Dacrydium* has a cartilage and corresponding pit. The generic name had long been used for a well-known kind of tree; so that we have a somewhat inconvenient employment of it in zoology as well as in botany.

Arcidæ.

Nucula reticulata *, Jeffr.

SHELL extremely convex and nearly globular, rather thin, glossy and semitransparent: *sculpture*, numerous and regular fine concentric ridges, which disappear towards the beaks and lunule; these ridges are crossed by equally numerous but almost microscopic longitudinal striæ, so as to give the surface a closely reticulated appearance: *colour* white: *epidermis* thin, yellowish-white to pale horn-colour: *margins* sloping on the anterior side to a rather sharp point, rounded and broad (or occasionally flexuous) in front, and wedge-shaped on the posterior side: *beaks* nearly in the middle of the dorsal area, prominent, and bulbous: *lunule* triangular and longish: *ligament* conspicuous and strong: *cartilage* and pit small: *hinge-*

* Reticulated.

line sharply angular: *hinge-plate* broad: *teeth* strong but short, 8 on the posterior and 6 on the anterior side: *inside* highly nacreous and glossy, smooth; inner margin closely and finely notched: *muscular scars* roundish. L. 0·15. B. 0·175.

An imperfect specimen and a small valve from Station 7, 1100 fms. 'Porcupine' Exp. 1869, off the north-western coast of Ireland, 420–1470 fms. 'Challenger' Exp., off Newfoundland, 1000 fms.

Allied to *N. tumidula*, Malm, = *pumila* (Lovén, MS.), Asbjørnsen, but differs in its smaller size, being more globular and having consequently a less triangular outline, its thinner texture, more prominent and nearly central beaks, and in its finely decussated sculpture.

Leda pusio, Philippi.

Nucula pusio, Phil. Moll. Sic. ii. p. 47, tab. xv. fig. 5.

Var. *laticor.* Rather larger than the fossil type, but not so solid, more oval than triangular in consequence of the posterior side being extended into a beak or point; agreeing in all other respects with the type.

Station 9, 1750 fms.; 12, 1450 fms. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 1180–1215 fms.; 1870, Bay of Biscay, 257–994 fms.

Fossil in Calabria (Seguenza). Type from Calabria also (Philippi); Messina (Seguenza).

Leda pustulosa *, Jeffr.

SHELL forming a short oval, equilateral as regards the position of the beaks, but not as regards the proportions of each side, convex, thin, opaque, glossy, and nacreous: *sculpture* consisting of slight wrinkled striae, which radiate from the beaks to the front, and of fine close-set but irregular concentric striae, besides the lines of growth; there is also a sharp ridge with a corresponding furrow on the posterior side, causing that last to appear pinched up: *colour* white, under a pale yellowish-brown *epidermis*, which has a peculiar blistered appearance: *margins* nearly straight at the back, rounded at the anterior side, sloping at the posterior side to a point something like that of a bill-hook, below which it is indented by the furrow, and curved in front: *beaks* central, prominent, and incurved: *lunule* inconspicuous: *ligament* wanting: *cartilage* and pit minute and narrow: *hinge-line* gently curved: *hinge-plate* broad, but not thick: *teeth* small, thorn-like, 12 on each

* Full of blisters.

side, including 3 or 4 minute tubercles close to the cartilage; a space is left on the outer sides of the hinge-plate between the margins and the teeth: *inside* smooth and polished: *scars* triangular and large. L. 0.15. B. 0.225.

Station 12, 1450 fms.; a single but large specimen. 'Porcupine' Exp., 1869, 420-1470 fms.; 1870, Bay of Biscay, 202-740 fms. Fossil in the Zanclean formation at Messina (Seguenza)!

Its nearest ally is *L. frigida*; but that species wants the peculiar sculpture and epidermis, as well as the drooping of the posterior side and indentation below the angle of *L. pustulosa*: its teeth are very much smaller, and they do not extend so far on the hinge-line. From *L. acuminata* (or *Messanensis*) it also differs in being more shortly oval, and having the posterior angle obtuse instead of acute.

Leda expansa *, Jeffr.

SHELL transversely oval, nearly equilateral, compressed, thin, semitransparent, and glossy: *sculpture*, numerous slight but regular concentric striæ, which are observable only by means of a lens and disappear towards the beaks; there are also faint traces of microscopic lines radiating from the beaks to the front: *colour* pale yellowish-white: *margins* nearly straight at the back except for the projection of the beaks, spread out and equally rounded at each side, and semicircular in front: *beaks* central, prominent, and calyciform: *lunule* forming a sharp ridge: *ligament* inconspicuous or wanting: *cartilage* and pit very minute, the latter sunken: *hinge-line* very gently curved: *hinge-plate* rather broad: *teeth* small, recurved, 7 or 8 on each side of the beak: *inside* polished, showing faint traces of the longitudinal striæ; margin plain: *scars* indistinct. L. 0.1. B. 0.175.

Station 9, 1750 fms.; 12, 1450 fms.; 13, 690 fms.: one living and a few more or less perfect specimens. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 1180-1380 fms.

Differs from *L. lucida* in being much smaller and more compressed; and the posterior side is rounded instead of pointed and angular.

Leda lata †, Jeffr.

SHELL forming a short oval, with an oblique contour, rather convex and solid, transparent, and highly glossy: *sculpture*, none except slight irregular lines of growth: *colour*

* Spread out.

† Broad.

pearl-white under the *epidermis*, which is pale yellowish: *margins* sloping on the back towards each side, which is equally rounded (the posterior side being upturned and occasionally more or less angular towards the point), semicircular in front: *beaks* placed about two-fifths nearer the anterior side, very small and incurved: *lunule* lance-shaped, narrow, and defined by a sharp ridge in the middle: *ligament* extremely slight: *cartilage* and pit very small: *hinge-line* obtusely angular, occupying the greater part of the dorsal area: *hinge-plate* narrow: *teeth* recurved, placed on the inside of the hinge-plate, 7 to 10 on each side: *inside* glossy; margin plain: *scars* slight and inconspicuous. L. 0.175. B. 0.2.

Station 9, 1750 fms.; 12, 1450 fms.; 13, 690 fms.; 16, 1785 fms. One living specimen and some valves. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 165-1443 fms.; 1870, off the coast of Portugal, 740-1095 fms. 'Challenger' Exp., lat. 37° 26' N., long. 25° 14' W., 1000 fms.

This has a peculiarly oblique outline, in consequence of the posterior side being upturned; and the true length (measured from the beak to the front margin) is proportionally greater than in the allied species. The position of the beak is eccentric compared with that in *L. expansa*.

*Leda sericea**, Jeffr.

SHELL transversely oval, somewhat inequilateral, convex, rather solid, opaque, and of a dullish hue: *sculpture*, numerous fine, regular, and close-set concentric striae, besides a few occasional lines of growth: *colour* white under the *epidermis*, which is pale yellowish: *margins* sloping from the beak to each side, which is equally rounded, gently curved in front: *beaks* placed nearer the anterior side, blunt or depressed: *lunule* long, inconspicuous: *ligament* slight: *cartilage* and pit small, the former horn-colour: *hinge-line* obtuse-angled: *hinge-plate* rather broad: *teeth* recurved towards the beak, 7 to 10 on the anterior and 10 to 15 on the posterior side; those close to the beak are minute and crowded, the others becoming much larger as they diverge outwards: *inside* smooth; margin plain: *muscular scars* pear-shaped: *pallial scar* distinct, placed within the margin. L. 0.1. B. 0.15.

Var. *ovata*. Longer in proportion to the breadth.

Station 12, 1450 fms. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 1366-1380 fms.; 1870, off the coast of Portugal, 740-1095 fms.

* Silky.

May be distinguished from any of the foregoing species by its peculiar sculpture. It resembles in shape a very young *Tapes pullastra*.

Genus GLOMUS*, Jeffreys.

SHELL nearly spherical: *cartilage* internal, elongated: *teeth* minute and set obliquely.

Has the aspect of *Pectunculus* and the hinge of *Leda*; but the cartilage is different, and the teeth are not arranged as in either of these genera.

Glomus nitenst†, Jeffr.

SHELL globular (except at the back, where the contour is interrupted by the beak and shoulders), thin, semitransparent, and glossy: *sculpture*, numerous and regular concentric striæ, which disappear towards the beaks; and with a microscope may sometimes be detected very fine longitudinal striæ: *colour* white, under a pale yellowish-brown *epidermis*: *margins* rounded: *beaks* small, rather prominent, and calyciform: *lunule* indistinct: *ligament* wanting: *cartilage* narrow, lance-shaped with the point inwards, dark horn-colour, placed along the hinge-line within the posterior side: *hinge-line* short, obtuse-angled: *hinge-plate* strong, broader on the anterior than on the other side: *teeth* oblique, 4 or 5 on the anterior side and twice as many on the posterior side; the former are short and strong, the latter longer and more delicate: *inside* polished and somewhat iridescent: *scars* triangular, but indistinct. L. 0.1125. B. 0.1125.

Station 9, 1750 fms. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 1180–1476 fms.; North Sea, 557 fms.

Limopsis tenella†, Jeffr.

SHELL obliquely oval, compressed, rather thin, although scarcely semitransparent, somewhat glossy: *sculpture*, irregular concentric lines of growth, and a few slight longitudinal striæ on the posterior side: *colour* white: *epidermis* pale yellowish-brown, arranged in numerous but not crowded rows, which radiate from the beaks: *margins* sloping, rounded on the anterior side and in front, and nearly straight on the posterior side: *beaks* small, prominent, and incurved: *cartilage* minute, dark horn-colour, contained in a triangular pit under-

* A ball of thread.

† Shining.

† Delicate.

neath the beaks: *hinge-line* straight: *hinge-plate* narrow, occupying about one-fifth of the circumference of the shell: *teeth* rather slight, slanting inwards, 4 or 5 on each side of the beak: *inside* porcellaneous, with a bevelled and smooth or plain but narrow edge: *scars* inconspicuous. L. 0·35. B. 0·3.

Station 12, 1450 fms.

Smaller and thinner than *L. aurita*, and more delicately sculptured; the epidermis is not pilous as in that species, but arranged in distinct rows; the hinge-line is straighter, the hinge-plate is narrower, and the teeth are much slighter and set obliquely on both sides of the beak. In *L. aurita* the teeth are erect on the anterior side, and slant inwards on the posterior side.

*Limopsis cristata**, Jeffr.

SHELL rounded, but inclined to become oblique in aged specimens (as in *Pectunculus glycymeris*), convex, rather solid, opaque, rather glossy: *sculpture*, numerous fine riblets or raised lines, which radiate from the beak, and equally fine concentric lines, causing by their intersection a slight cancellation; the concentric lines are not granulated or beaded: *colour* white: *epidermis* light yellowish-brown, arranged in regular spinous rows, except towards the front, where it is somewhat matted and projects beyond the edge of the shell: *margins* nearly straight at the back, and rounded at the sides and in front: *beaks* small, rather prominent, blunt, and incurved: *hinge-area* long, reddish brown, smooth: *cartilage* horn-colour, placed in a triangular cavity under the beaks: *hinge-line* gently curved: *hinge-plate* broad, occupying about one-fourth of the circumference of the shell: *teeth* small but strong, straightish, varying in number from 5 to 8 on each side: *inside* glossy, indistinctly striated lengthwise, furnished with a close-set row of small tubercles a little within the edge of the shell; these tubercles are nearly equal in size: *scars* conspicuous. L. 0·25. B. 0·25.

Station 13, 690 fms. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 420-808 fms.; Bay of Biscay, 517 fms.; North Sea, 542 fms.: 1870, Bay of Biscay, 292-1095 fms.

It is distinguishable from *L. minuta* (*borealis*, Woodward) by its shape and sculpture, its coarser epidermis (which in *L. minuta* is much finer and greater in quantity), its teeth being upright on both sides, instead of being oblique on the posterior side, and by the marginal tubercles being equal in size throughout and not larger on that side. Having, since

* Crested.

the publication of my last volume on British Conchology, had the opportunity of comparing a great many living specimens of all ages and sizes of *L. borealis*, Woodward, from various parts and depths of the North Atlantic and Mediterranean, with an equally extensive series of the fossil *L. minuta*, Philippi, I am now quite satisfied that they are one and the same species. The differential characters noticed by me are very variable. The name *minuta* must therefore be substituted for *borealis*. My *L. pygmaea*, from Corsica, is the young of this species, as well as *L. tenuis* of Seguenza, from the Straits of Messina.

Malletia excisa, Philippi.

Nucula excisa, Phil. Moll. Sic. ii. p. 46, tab. xv. f. 4.

Station 9, 1750 fms. ; 12, 1450 fms. One living specimen and some valves. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 1443 fms. Fossil in Calabria (Philippi) ; Zanclean formation at Messina (Seguenza) !

A remarkable and beautiful species. The transverse striae are rather more numerous and close-set in the recent than in fossil specimens. The ligament in this, as well as in other species of the genus *Malletia* of Desmoulins (= *Solenella*, Sowerby, = *Ctenoconcha*, Gray), is wholly external ; in *M. excisa* it extends on both sides of the beaks.

The present species belongs to a section or group which Messrs. Adams have designated under the generic name *Neilo*. Desmoulins and Sowerby published their two genera in the same year, 1832 ; but the Number of the 'Actes' of the Linnean Society of Bordeaux in which the former described and figured *Malletia* bears date the 15th of February, while the Number of the 'Proceedings' of the Zoological Society of London in which the latter described *Solenella* is dated December 11. Sowerby considered his genus to belong to the *Solen* family. No one seems to have noticed the cartilage and its corresponding pit or depression in the hinge.

*Malletia cuneata**, Jeffr.

SHELL obliquely oblong, inequilateral, compressed, thin, semitransparent, glossy and somewhat nacreous : *sculpture* none, except slight and irregular lines of growth : *colour* whitish, under a thin and pale yellowish-brown *epidermis* : *margins* sloping gradually on the back towards each end, rounded on the anterior side, bluntly angular and wedge-shaped on the posterior side, and gently curved in front : *beaks* situate

* Wedge-shaped.

near the anterior side at about two-fifths the length of the back; they are small, slightly prominent, and calyciform: *lunule* indistinct: *ligament* narrow, yellowish brown, altogether external and placed between the "nymphæ," or pouting edges of the shell, on the posterior side: *cartilage* minute, oblong, contained in a narrow depression immediately underneath the beaks: *hinge-line* obtuse-angled: *hinge-plate* rather narrow: *teeth* small, erect, and pointed, 12 on the anterior side and 20 on the posterior side, the middle of the hinge-plate forming the cartilage-pit: *inside* polished; edge plain: *muscular* and *pallial scars* large and conspicuous. L. 0.2. B. 0.35.

Station 9, at the entrance of Davis Strait, 1750 fms.; Station 12, in the North Atlantic, 1450 fms. 'Porcupine' Exp., 1869, off the north-western coast of Ireland, 1215-1443 fms.; 1870, Bay of Biscay, 718-1095 fms., and Mediterranean, 1415 fms. Norwegian Exp., 1876, 1800 fms.

May be easily known from *M. obtusa*, Sars, by its very different shape.

XLIII.—Description of a new Species of *Macrotus*.

By G. E. DOBSON, M.A., M.B., F.L.S., &c.

Macrotus bocourtianus, n. sp.

Ears as long as the head: front margin of the nose-leaf scarcely defined, continuous with the upper lip; terminal leaf narrow and subacutely pointed: last caudal vertebra and half the antepenultimate vertebra free; the free portion of the tail nearly equal to the thumb in length.

Teeth as in *M. waterhousii*. Fur dark brown above, paler beneath.

Length (of a specimen not quite full-grown)—head and body 2.15 inches; tail 1.35, tail free from membrane 0.4; head 1.0; ear 1.0; tragus 0.4; nose-leaf 0.3; forearm 2.05; thumb 0.5; second finger—metacarp. 1.5, first phalanx 0.68, second phalanx 0.7, third phalanx 0.6; third finger—metacarp. 1.4, first phalanx 0.65, second phalanx 0.55; fourth finger—metacarp. 1.6, first phalanx 0.6, second phalanx 0.45; tibia 0.85; calcaneum 0.35; foot and claws 0.45.

The above description has been taken from the largest of four specimens preserved in the Paris Museum, obtained by M. Bocourt in Vera Paz, Guatemala, which, through the kindness of M. Alph. Milne-Edwards, I have been enabled to examine and describe. All the specimens agree in the remarkable length of the projecting portion of the tail, and in other characters described above.